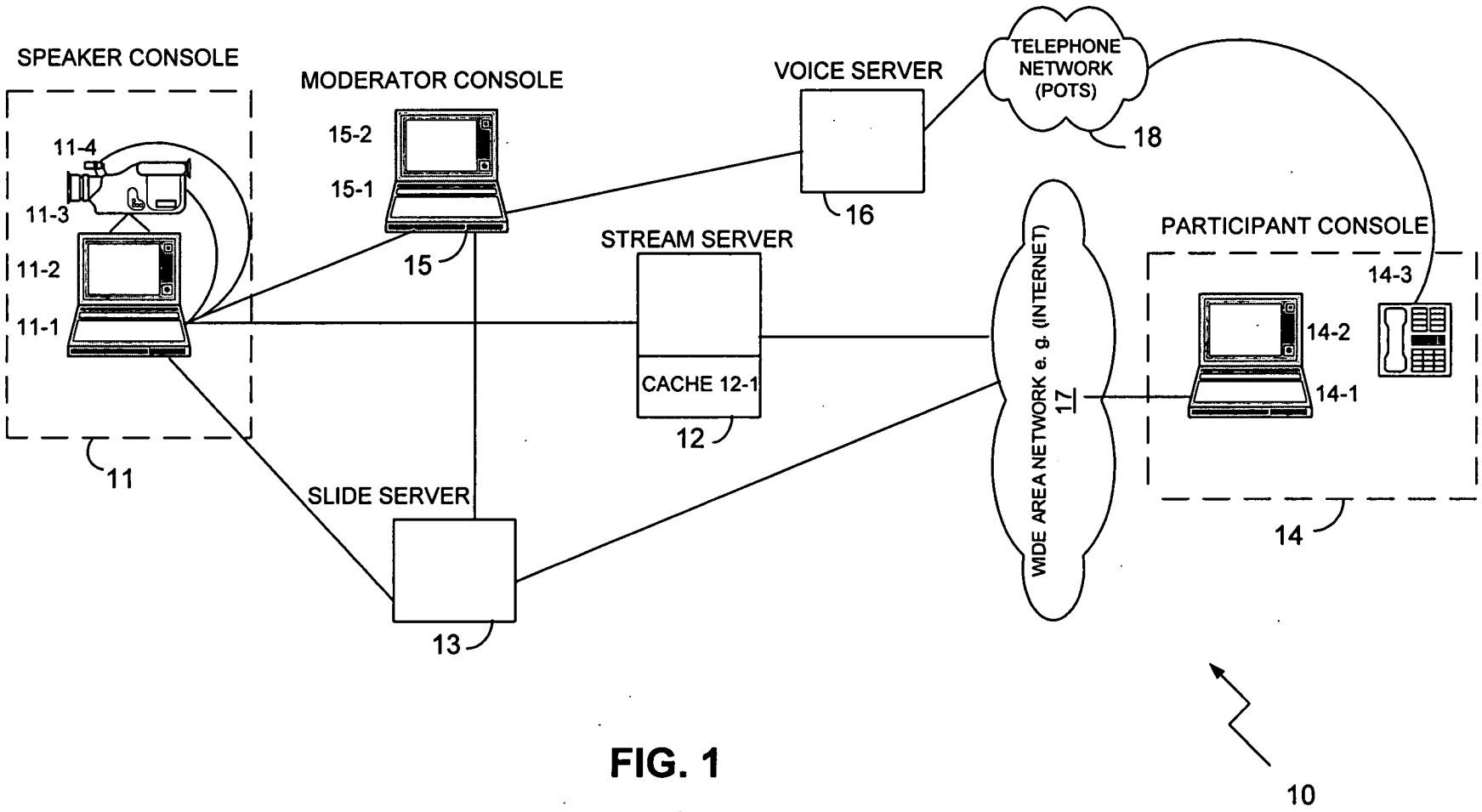

SPEAKER CONSOLE
MODERATOR CONSOLE
VOICE SERVER
TELEPHONE NETWORK (POTS)
18
11-4
11-3
11-2
11-1
15-2
15-1
15
16
STREAM SERVER
CACHE 12-1
12
PARTICIPANT CONSOLE
14-3
14-2
14-1
WIDE AREA NETWORK e. g. (INTERNET)
17
11
SLIDE SERVER
13
14
10

FIG. 1

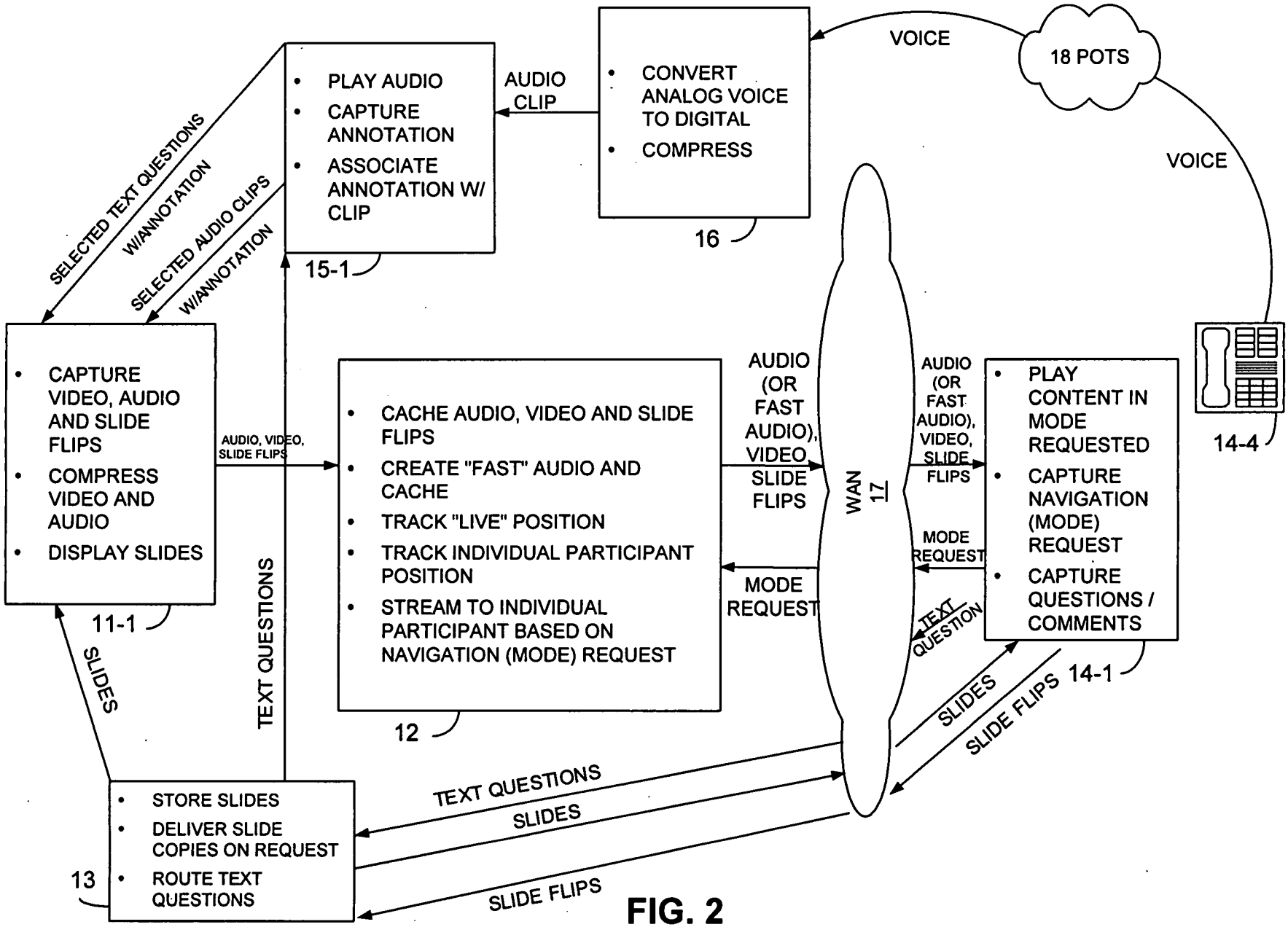
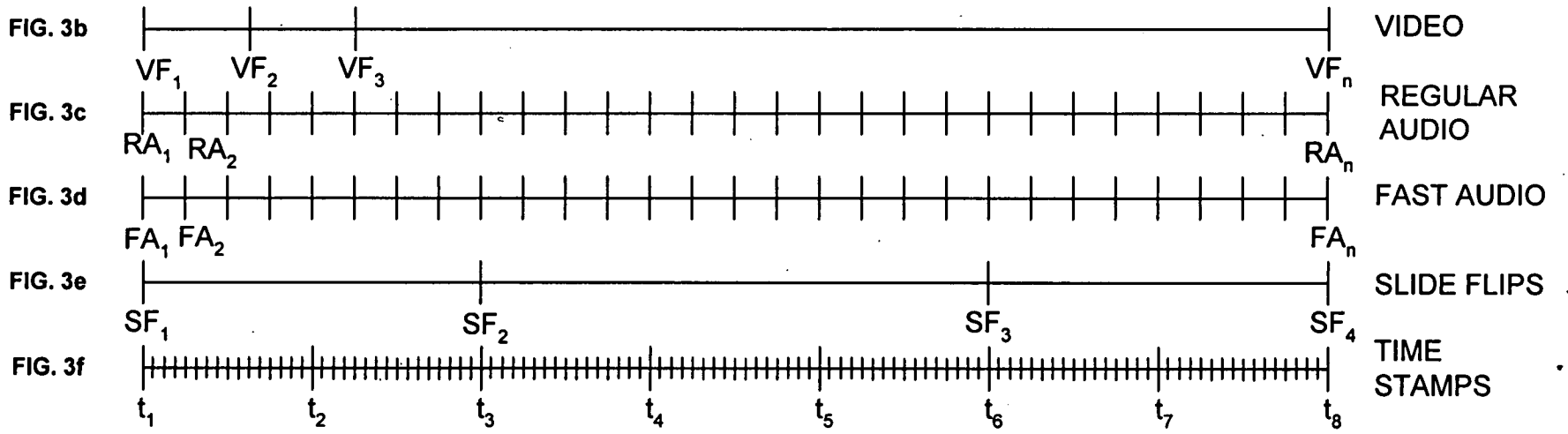

SELECTED TEXT QUESTIONS W/ANNOTATION
SELECTED AUDIO CLIPS W/ANNOTATION
PLAY AUDIO
CAPTURE ANNOTATION
ASSOCIATE ANNOTATION W/ CLIP
15-1
AUDIO CLIP
CONVERT ANALOG VOICE TO DIGITAL
COMPRESS
16
VOICE
18 POTS
VOICE
CAPTURE VIDEO, AUDIO AND SLIDE FLIPS
COMPRESS VIDEO AND AUDIO
DISPLAY SLIDES
11-1
AUDIO, VIDEO, SLIDE FLIPS
CACHE AUDIO, VIDEO AND SLIDE FLIPS
CREATE "FAST" AUDIO AND CACHE
TRACK "LIVE" POSITION
TRACK INDIVIDUAL PARTICIPANT POSITION
STREAM TO INDIVIDUAL PARTICIPANT BASED ON NAVIGATION (MODE) REQUEST
12
AUDIO (OR FAST AUDIO), VIDEO SLIDE FLIPS
MODE REQUEST
WAN 17
AUDIO (OR FAST AUDIO), VIDEO, SLIDE FLIPS
MODE REQUEST
TEXT QUESTION
PLAY CONTENT IN MODE REQUESTED
CAPTURE NAVIGATION (MODE) REQUEST
CAPTURE QUESTIONS / COMMENTS
14-1
14-4
SLIDES
SLIDE FLIPS
SLIDES
TEXT QUESTIONS
STORE SLIDES
DELIVER SLIDE COPIES ON REQUEST
ROUTE TEXT QUESTIONS
13
TEXT QUESTIONS
SLIDES
SLIDE FLIPS

FIG. 2

MODE	DATA STREAMS	CONTENT DELIVERY SPEED	TIME STAMP OF DATA PLAYED
LIVE	VIDEO, REGULAR AUDIO, SLIDE FLIPS	NORMAL	REAL TIME (TIME OF LATEST DATA CAPTURE + NETWORK LATENCY)
REWIND	VIDEO, SLIDE FLIPS (SFn-1)	FAST (REVERSE TIME STAMP ORDER)	DEPENDENT ON USER REQUEST
PLAY	VIDEO, REGULAR AUDIO, SLIDE FLIPS	NORMAL	DEPENDENT ON USER REQUEST
CATCH-UP	VIDEO, FAST AUDIO, SLIDE FLIPS	FAST	BEGIN: DEPENDENT ON USER REQ. & ut< rt END: WHEN ut = rt
PAUSE	———	———	———

FIG. 3a



PATENT APPLICATION

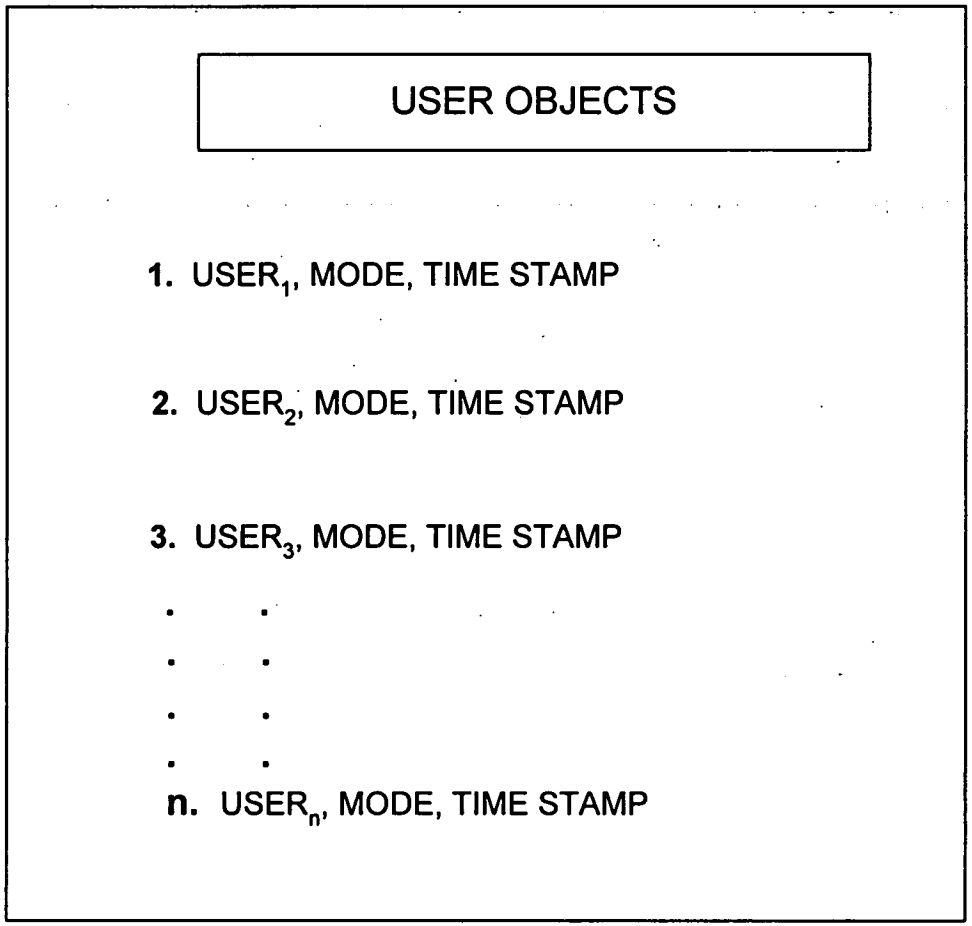


FIG. 4

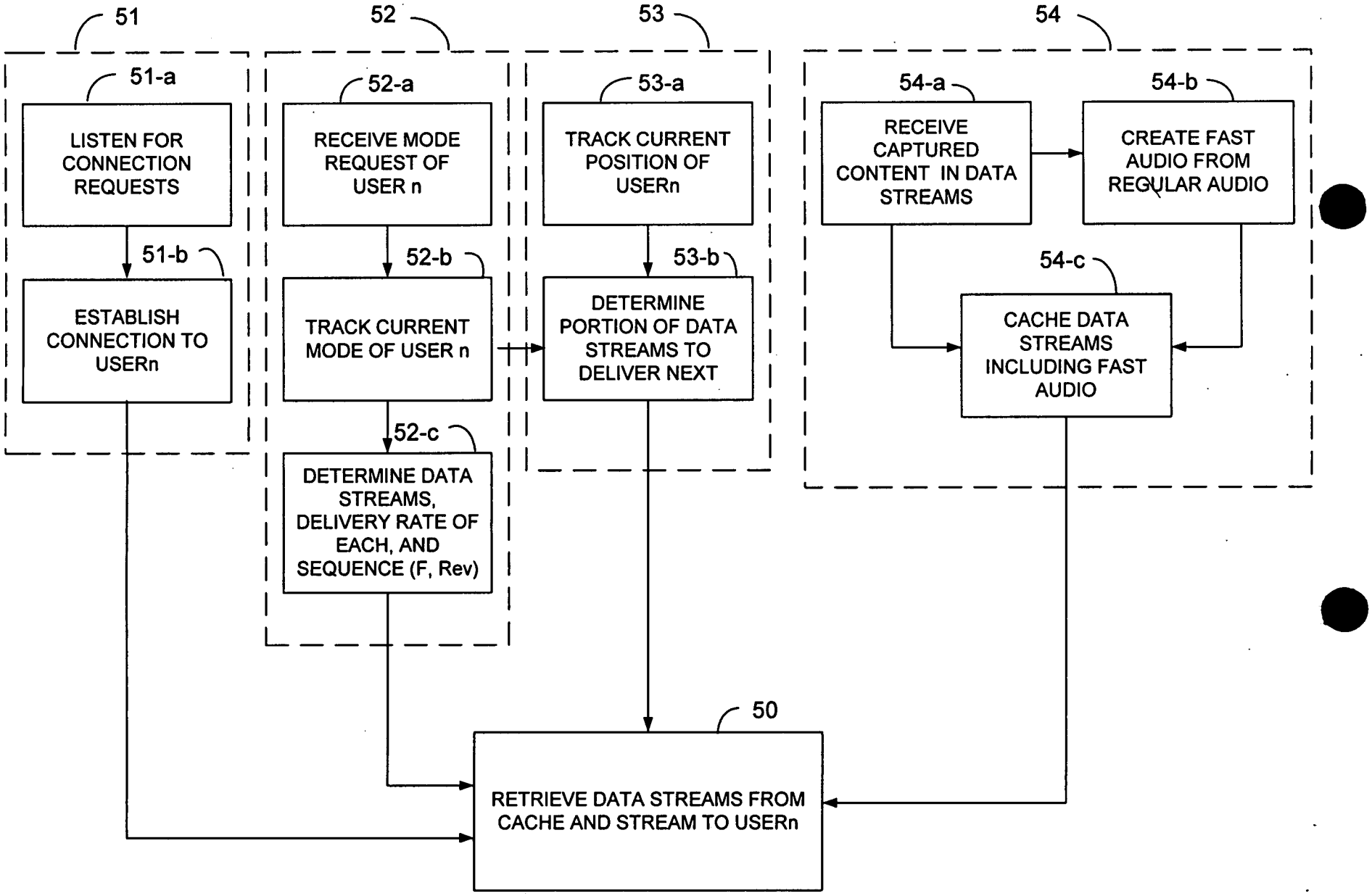

51
52
53
54
51-a
LISTEN FOR CONNECTION REQUESTS
51-b
ESTABLISH CONNECTION TO USERn
52-a
RECEIVE MODE REQUEST OF USER n
52-b
TRACK CURRENT MODE OF USER n
52-c
DETERMINE DATA STREAMS, DELIVERY RATE OF EACH, AND SEQUENCE (F, Rev)
53-a
TRACK CURRENT POSITION OF USERn
53-b
DETERMINE PORTION OF DATA STREAMS TO DELIVER NEXT
54-a
RECEIVE CAPTURED CONTENT IN DATA STREAMS
54-b
CREATE FAST AUDIO FROM REGULAR AUDIO
54-c
CACHE DATA STREAMS INCLUDING FAST AUDIO
50
RETRIEVE DATA STREAMS FROM CACHE AND STREAM TO USERn

FIG. 5

1	MODE	LIVE			REWIND		PLAY			LIVE	
2	DATA DELIVERED	VF_1	VF_2	VF_3	VF_2	VF_1	VF_1	VF_2	VF_3	VF_9	VF_{10}
3	ORIGINAL TIME STAMP	t_1	t_2	t_3	t_2	t_1	t_1	t_2	t_3	t_9	t_{10}
4	ADJUSTED TIME STAMP	t_1	t_2	t_3	t_4	t_5	t_6	t_7	t_8	t_9	t_{10}
5	REAL TIME	t_1									t_{10}

FIG. 6

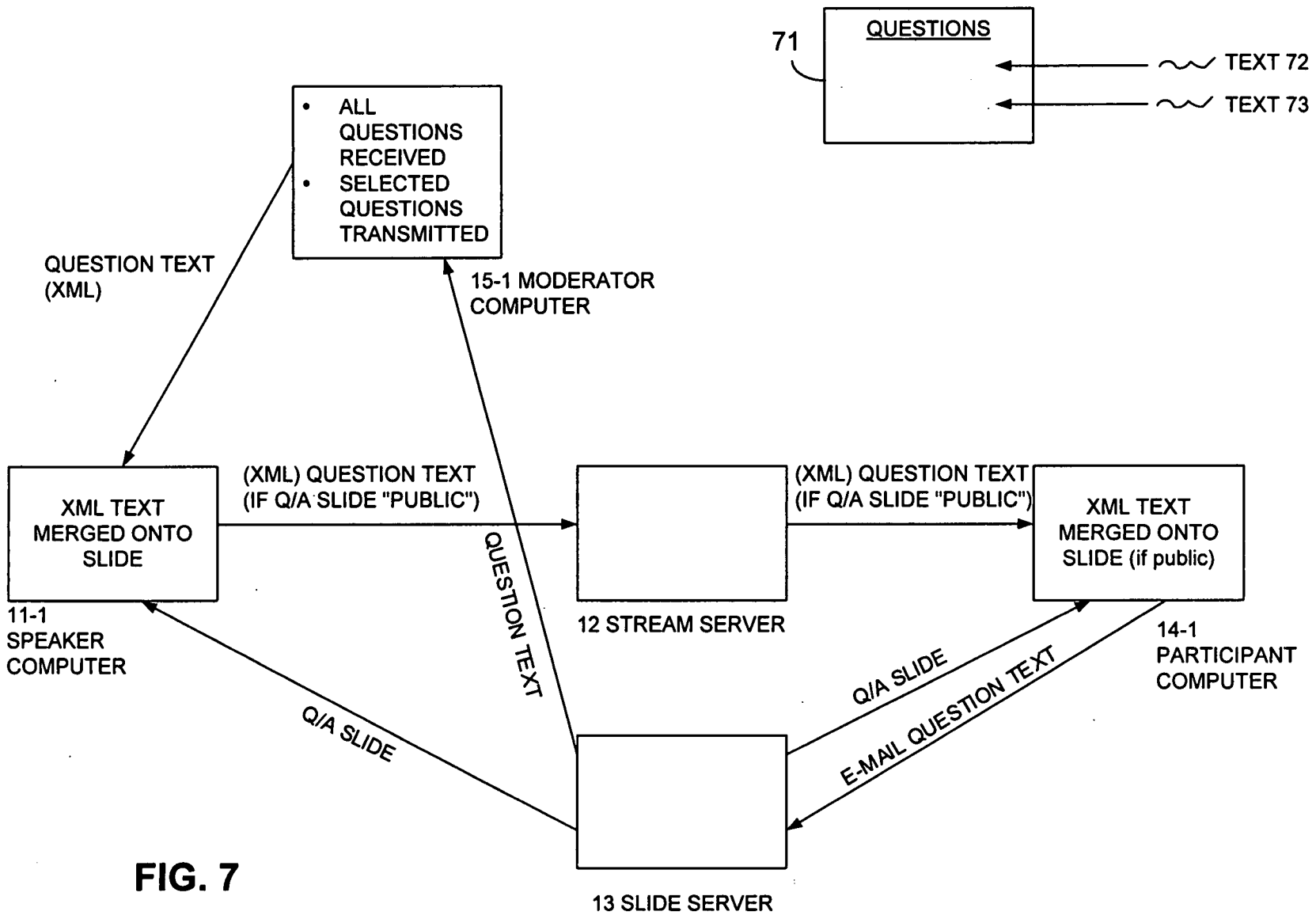

71
QUESTIONS
TEXT 72
TEXT 73
• ALL QUESTIONS RECEIVED
• SELECTED QUESTIONS TRANSMITTED
QUESTION TEXT (XML)
15-1 MODERATOR COMPUTER
XML TEXT MERGED ONTO SLIDE
(XML) QUESTION TEXT (IF Q/A SLIDE "PUBLIC")
(XML) QUESTION TEXT (IF Q/A SLIDE "PUBLIC")
XML TEXT MERGED ONTO SLIDE (if public)
11-1 SPEAKER COMPUTER
12 STREAM SERVER
14-1 PARTICIPANT COMPUTER
QUESTION TEXT
Q/A SLIDE
Q/A SLIDE
E-MAIL QUESTION TEXT
13 SLIDE SERVER

FIG. 7